

Date: Wednesday, 6/6/2007 1:48:32 PM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 03.250 SUPPORT  
 Job Number : 32780 - 1  
 Estimate Number : 10387  
 P.O. Number :  
 This Issue : 6/6/2007 S.O. No. :  
 Prsht Rev. : NC Part Number : D29401  
 First Issue : / / Type : MACHINED PARTS Drawing Number : D2940 REV B  
 Previous Run : 32169 Project Number : N/A  
 Material :  
 Due Date : 6/30/2007 Qty: 20 Um: Each  
 Written By :  
 Checked & Approved By : JA 07.06.07  
 Comment : Est. C 02.11.26 Reformat; Added P/O KJ  
 Est Rev:D Added priming as per Rev B 07-04-30 JLM

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D6104007 17-4 SS Roundbar 4.50"OD



Comment: Qty.: 1.0000 Each(s)/Unit Total : 20.0000 Each(s)

17-4 SS Roundbar 4.50"OD

D6104-007

BATCH: 32780A

2.0 32780A ROUND BILLET 17-4



Comment: Sub-Component ROUND BILLET 17-4

D6104-007 B 32780A

3.0 MORI SEIKI MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

Turn blank for Haas as per Folio FA079

J.F. / J.L 07/09/17 (19)

4.0 QC1 INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

J.L 07/09/17 (19)

5.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS

1- Machine as per Folio FA079

2- Tumble & Deburr

JA / J.F. 07/09/22 (19)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2940-1 PAR #: NA Fault Category: Prod/Machined Parts NCR: (Yes) No DQA: (D) Date: 07/10/04  
 QA: N/C Closed: (S) Date: 07.10.04

NCR: <u>32780</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07/01/07	# 3.0	Use Blank from Mar. has a large cut out from changing the Program. RC operator Error upon set-up.	<u>AS</u> 07/09/26	Screen and destroy and RPO Reprec. Tell employee operator to see QC when parts are Scrap. Do not allow parts to go to next steps.	<u>ml</u> 07/01/26	<u>AS</u> 07/09/26	<u>AS</u> 07/09/26	<u>En</u> 07/01/07

NOTE: Date & initial all entries



Date: Wednesday, 6/6/2007 1:48:32 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 03.250 SUPPORT

Job Number: 32780

Part Number: D29401

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

*ml 07/09/26*

*19*

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

*ml 07-08-26 (19)*

8.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.2) as per QSI 005 4.3

\*\*\*\*\*Mask Inside Surface as per Dwg D2940\*\*\*\*\*

*m 105068*

*FL 07/09/26 (19)*

9.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

Prime inside surface as per Dwg D2940 and QSI 005 4.3.

*I.T 07 09 28*

10.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

*ml 07 09 30 (16)*

11.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *LG*

*ml 07/10/01 (16)*

12.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

*07.10.02*

Job Completion



*U 07-02*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	<b>32780</b>
<b>Description:</b> Ø3.250 Support		<b>Part Number:</b>	<b>D2940-1</b>
<b>Inspection Dwg:</b> D2940 Rev. B		<b>Page 1 of 1</b>	

Inspect dimensions highlighted on inspection sheet drawing D2940 Rev. B / DSK081 Rev. B & record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	③	4	By	Date
<b>Lathe Section</b>									
A	3.211	3.216		3.215	3.214	3.212	3.314		
B	4.946	4.966		4.966	4.960	4.960	4.959		
C	0.718	0.738		.732	.725	.725	.729		
D	0.090	0.110		.099	.102	.102	.098		
E	3.564	3.584		3.574	3.572	3.574	3.574		
F	0.022	0.042		.032	.032	.032	.032		
G	3.444	3.464		3.456	3.455	3.457	3.457		
H	0.112	0.132		.121	.121	.121	.121		
I	2.170	2.190		2.177	2.177	2.172	2.174		
J	4.451	4.471		4.458	4.455	4.455	4.456		
K	0.413	0.433		.430	.433	.433	.433		
L	0.913	0.933		.913	.913	.913	.913		
M									
N									
<b>HAAS Section</b>									
AA	0.240	0.260		.250	0.250	0.250	.250		
AB	0.490	0.510		0.500	0.506	0.506	.500		
AC	0.140	0.160		.154	0.152	0.153	.154		
AD	3.510	3.530		3.527	3.523	3.524	3.520		
AE	1.633	1.673		1.653	1.658	1.656	1.673		
AF	1.493	1.513		1.500	1.506	1.501	1.513		
AG	0.040	0.060		.050	0.047	0.048	.050		
AH	0.188	0.193		.189	0.189	0.189	.189		
AI	0.140	0.160		.150	0.148	0.152	.150		
AJ	2.518	2.538		2.532	2.528	2.528	2.532		
AK	0.040	0.060		0.052	0.050	0.050	.050		
AL	0.010	0.020		.015	0.015	0.015	.015		
AM	0.140	0.160		0.147	0.147	0.148	.150		
AN	0.350	0.450		0.375	0.380	0.376	.375		
AO	0.240	0.260		.250	0.250	0.256	.250		
AP	0.150	0.170		.150	0.162	0.166	.150		
AQ	0.053	0.073		.063	0.063	0.063	.063		
AR	101.64	105.64		103.64	103.64	103.64	103.64		
AS	0.257	0.262		.261	0.264	0.263	.261		
AT	0.053	0.073		.063	0.063	0.063	.063		
AU	4.118	4.138		4.137	4.128	4.132	4.137		
AV									
<b>Accept/Reject</b>									

Measured by: <b>J.F.</b>	Audited by: <b>[Signature]</b>
Date: <b>07/09/11</b>	Date: <b>07-09-25</b>

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	07.05.08	Dwg Rev. updated	KJ/JLM	<b>[Signature]</b>



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 32780
<b>Description:</b> Ø3.250 Support		<b>Part Number:</b> D2940-1
<b>Inspection Dwg:</b> D2940 Rev. B		<b>Page 1 of 1</b>

Inspect dimensions highlighted on inspection sheet drawing D2940 Rev. B / DSK081 Rev. B & record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1 15	2 16	3 17	4 18	By	Date
Lathe Section									
A	3.211	3.216		3.212	3.212	3.212	3.213		
B	4.946	4.966		4.958	4.958	4.958	4.958		
C	0.718	0.738		.730	.730	.730	.730		
D	0.090	0.110		.099	.098	.098	.098		
E	3.564	3.584		3.573	3.574	3.574	3.574		
F	0.022	0.042		.032	.032	.032	.032		
G	3.444	3.464		3.457	3.457	3.457	3.457		
H	0.112	0.132		.120	.121	.121	.120		
I	2.170	2.190		2.173	2.178	2.175	2.179		
J	4.451	4.471		4.457	4.456	4.456	4.456		
K	0.413	0.433		.433	.433	.433	.433		
L	0.913	0.933		.920	.920	.920	.920		
M									
N									
HAAS Section									
AA	0.240	0.260		0.250	0.250	.250	.250		
AB	0.490	0.510		0.500	0.506	.500	.500		
AC	0.140	0.160		0.150	0.152	.150	.150		
AD	3.510	3.530		3.523	3.523	3.524	3.524		
AE	1.633	1.673		1.668	1.653	1.669	1.669		
AF	1.493	1.513		1.513	1.503	1.512	1.512		
AG	0.040	0.060		0.050	0.049	.051	.051		
AH	0.188	0.193		0.189	0.190	.188	.188		
AI	0.140	0.160		0.147	0.148	.150	.150		
AJ	2.518	2.538		2.528	2.528	2.528	2.528		
AK	0.040	0.060		0.046	0.047	.053	.053		
AL	0.010	0.020		0.015	0.015	.015	.015		
AM	0.140	0.160		0.150	0.147	.151	.150		
AN	0.350	0.450		0.356	0.356	.375	.375		
AO	0.240	0.260		0.250	0.250	.250	.250		
AP	0.150	0.170		0.156	0.158	.156	.156		
AQ	0.053	0.073		0.063	0.063	.063	.063		
AR	101.64	105.64		103.64	103.64	103.64	103.64		
AS	0.257	0.262		0.263	0.264	.263	.263		
AT	0.053	0.073		0.063	0.063	.063	.063		
AU	4.118	4.138		4.128	4.129	4.130	4.130		
AV									
Accept/Reject									

Measured by: J.L. 19mk	Audited by: [Signature]
Date: 07/09/12 07/09/12	Date: 02-09-25

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	07.05.08	Dwg Rev. updated	KJ/JLM	[Signature]



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 32780
<b>Description:</b> Ø3.250 Support		<b>Part Number:</b> D2940-1
<b>Inspection Dwg:</b> D2940 Rev. B		Page 1 of 1

Inspect dimensions highlighted on inspection sheet drawing D2940 Rev. B / DSK081 Rev. B & record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	1 <sup>9</sup>	2 <sup>10</sup>	3 <sup>11</sup>	4 <sup>12</sup>		
Lathe Section									
A	3.211	3.216		* 3.220	3.213	3.213	3.213		
B	4.946	4.966		4.958	4.954	4.957	4.958		
C	0.718	0.738		.730	.730	.730	.730		
D	0.090	0.110		.099	.096	.097	.100		
E	3.564	3.584		3.574	3.574	3.573	3.574		
F	0.022	0.042		.032	.032	.032	.032		
G	3.444	3.464		3.456	3.456	3.456	3.457		
H	0.112	0.132		.119	.121	.121	.120		
I	2.170	2.190		2.176	2.174	2.176	2.178		
J	4.451	4.471		4.456	4.456	4.457	4.456		
K	0.413	0.433		.433	.433	.433	.433		
L	0.913	0.933		.920	.920	.920	.920		
M									
N									
HAAS Section									
AA	0.240	0.260		.250	.250	.250	.250		
AB	0.490	0.510		.500	.500	.500	.500		
AC	0.140	0.160		.152	.154	.154	.150		
AD	3.510	3.530		3.530	3.520	3.523	3.520		
AE	1.633	1.673		1.670	1.653	1.673	1.653		
AF	1.493	1.513		1.510	1.500	1.500	1.500		
AG	0.040	0.060		.050	.050	.050	.050		
AH	0.188	0.193		.188	.188	.188	.188		
AI	0.140	0.160		.150	.150	.150	.150		
AJ	2.518	2.538		2.518	2.528	2.521	2.520		
AK	0.040	0.060		0.042	0.048	0.047	.050		
AL	0.010	0.020		.015	.015	.015	.018		
AM	0.140	0.160		0.146	0.147	0.147	.150		
AN	0.350	0.450		.350	.350	.350	.360		
AO	0.240	0.260		.250	.250	.250	.250		
AP	0.150	0.170		.163	.163	.160	.160		
AQ	0.053	0.073		.063	.063	.063	.063		
AR	101.64	105.64		103.64	103.64	103.64	103.64		
AS	0.257	0.262		.262	.262	.262	.262		
AT	0.053	0.073		.063	.063	.063	.063		
AU	4.118	4.138		4.128	4.128	4.128	4.128		
AV									
Accept/Reject									

Measured by: J.L.	Audited by: J.L.
Date: 07/09/25	Date: 07/09/25

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	07.05.08	Dwg Rev. updated	KJ/JLM	



<b>DART AEROSPACE LTD</b>	<b>Work Order:</b> 32780
<b>Description:</b> Ø3.250 Support	<b>Part Number:</b> D2940-1
<b>Inspection Dwg:</b> D2940 Rev. B	<b>Page 1 of 1</b>

Inspect dimensions highlighted on inspection sheet drawing D2940 Rev. B / DSK081 Rev. B & record below:

				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1 <sup>13</sup>	2 <sup>14</sup>	3 <sup>15</sup>	4 <sup>16</sup>	By	Date
Lathe Section									
A	3.211	3.216		3.213	3.213	3.2125	3.2135		
B	4.946	4.966		4.958	4.956	4.957	4.958		
C	0.718	0.738		.731	.730	.731	.730		
D	0.090	0.110		.100	.100	.100	.099		
E	3.564	3.584		3.574	3.574	3.574	3.575		
F	0.022	0.042		.032	.032	.032	.032		
G	3.444	3.464		3.456	3.456	3.456	3.457		
H	0.112	0.132		.121	.120	.122	.121		
I	2.170	2.190		2.176	2.177	2.176	2.176		
J	4.451	4.471		4.456	4.456	4.456	4.457		
K	0.413	0.433		.433	.433	.433	.433		
L	0.913	0.933		.915	.915	.915	.915		
M									
N									
HAAS Section									
AA	0.240	0.260		.250	0.250	0.250	0.250		
AB	0.490	0.510		.500	0.500	0.500	0.500		
AC	0.140	0.160		.150	0.150	0.150	0.150		
AD	3.510	3.530		3.523	3.520	3.521	3.522		
AE	1.633	1.673		1.673	1.671	1.670	1.668		
AF	1.493	1.513		1.513	1.513	1.513	1.513		
AG	0.040	0.060		.050	0.050	0.050	0.050		
AH	0.188	0.193		.188	0.188	0.188	0.188		
AI	0.140	0.160		.150	0.150	0.150	0.150		
AJ	2.518	2.538		2.534	2.528	2.528	2.528		
AK	0.040	0.060		.047	0.047	0.048	0.047		
AL	0.010	0.020		.015	0.015	0.015	0.015		
AM	0.140	0.160		.149	0.149	0.151	0.147		
AN	0.350	0.450		.370	0.370	0.370	0.370		
AO	0.240	0.260		.250	0.250	0.250	0.250		
AP	0.150	0.170		.160	0.160	0.160	0.160		
AQ	0.053	0.073		.063	0.063	0.063	0.063		
AR	101.64	105.64		103.64	103.64	103.64	103.64		
AS	<del>0.257</del>	<del>0.262</del>		.263	0.263	0.263	0.263		
AT	0.053	0.073		.063	0.063	0.063	0.063		
AU	4.118	4.138		4.128	4.128	4.128	4.128		
AV									
Accept/Reject									

Measured by: J.L. [Signature]	Audited by: [Signature]
Date: 07/10/16 07/04/21	Date: 07-09-25

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	07.05.08	Dwg Rev. updated	KJ/JLM [Signature]	[Signature]



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 32780
<b>Description:</b> Ø3.250 Support		<b>Part Number:</b> D2940-1
<b>Inspection Dwg:</b> D2940 Rev. B		<b>Page 1 of 1</b>

Inspect dimensions highlighted on inspection sheet drawing D2940 Rev. B / DSK081 Rev. B & record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	1 <sup>17</sup>	2 <sup>18</sup>	3 <sup>19</sup>	4 <sup>26</sup>		
Lathe Section									
A	3.211	3.216		3.213	3.213	3.212	3.213"		
B	4.946	4.966		4.958	4.958	4.958	4.950"		
C	0.718	0.738		.700	.731	.731	.731		
D	0.090	0.110		.099	.099	.098	.099		
E	3.564	3.584		3.574	3.574	3.574	3.574		
F	0.022	0.042		.032	.032	.032	.032		
G	3.444	3.464		3.456	3.456	3.457	3.457		
H	0.112	0.132		.121	.122	.124	.121"		
I	2.170	2.190		2.174	2.177	2.177	2.177		
J	4.451	4.471		4.456	4.457	4.457	4.456		
K	0.413	0.433		.433	.433	.430	.430"		
L	0.913	0.933		.915	.915	.915	.918"		
M									
N									
HAAS Section									
AA	0.240	0.260		0.250	0.250	0.250			
AB	0.490	0.510		0.500	0.500	0.500			
AC	0.140	0.160		0.150	0.150	0.152			
AD	3.510	3.530		3.521	3.520	3.519			
AE	1.633	1.673		1.670	1.667	1.6669			
AF	1.493	1.513		1.513	1.511	1.513			
AG	0.040	0.060		0.050	0.050	0.050			
AH	0.188	0.193		0.188	0.188	0.188			
AI	0.140	0.160		0.150	0.150	0.149			
AJ	2.518	2.538		2.528	2.528	2.528			
AK	0.040	0.060		0.050	0.050	0.050			
AL	0.010	0.020		0.010	0.010	0.010			
AM	0.140	0.160		0.151	0.152	0.144			
AN	0.350	0.450		0.360	0.361	0.370			
AO	0.240	0.260		0.250	0.250	0.250			
AP	0.150	0.170		0.161	0.161	0.157			
AQ	0.053	0.073		0.063	0.063	0.063			
AR	101.64	105.64		103.64	103.64	103.64			
AS	0.257	0.262		0.263	0.263	0.264			
AT	0.053	0.073		0.063	0.063	0.063			
AU	4.118	4.138		4.129	4.129	4.127			
AV									
Accept/Reject									

<b>Measured by:</b> J.L./J.F. 19mb	<b>Audited by:</b> J.F.
<b>Date:</b> 07/09/14 07/09/21	<b>Date:</b> 07-09-25

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	07.05.08	Dwg Rev. updated	KJ/JLM	

SECTION B-B  
SCALE 1:1

TO CENTER

0.060 (TYP)

R0.032 (TYP)

R0.063 (TYP)

4.128

2.528

8°

R0.063 (TYP)

0.728 (TYP)

0.100 (TYP)

0.060 (REF)

0.150






0.050

R\*03.64±2 (THIS EDGE ONLY)

R0.063 (TYP ALL AROUND INSIDE EDGE)

SECTION A-A  
TOOLING HOLE DETAIL  
SCALE 1:1





- 1) MATERIAL: 17-4 PH STAINLESS STEEL  
HEAT TREAT TO H900 CONDITION  
(900°F FOR 1 HR, AIR COOL)  
MIN UTS = 170 KSI (38 HRc)
- 2) IDENTIFY WITH DART LOGO AND PART NUMBER IN THIS AREA  
WITH 0.125 HIGH LETTERING 0.010-0.020 DEEP
- 3) BREAK ALL UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) FINISH: POWDER COAT WHITE (REF 4.3.5.2) PER DART QSI 005 4.3  
PRIME INSIDE SURFACE AS SHOWN PER DART QSI 005 4.2

B	07.03.16	UPDATE PER NCR 642, PRIME INSIDE	
A	01.01.10	NEW ISSUE	
DESIGN		DRAWN BY	
CHECKED		APPROVED	
DATE		TITLE	
07.03.16		ø3.250 SUPPORT	
		 <b>DART AEROSPACE LTD.</b> MISSISSAUGA, ONTARIO, CANADA	
		REV. SHEET 1 OF 1	

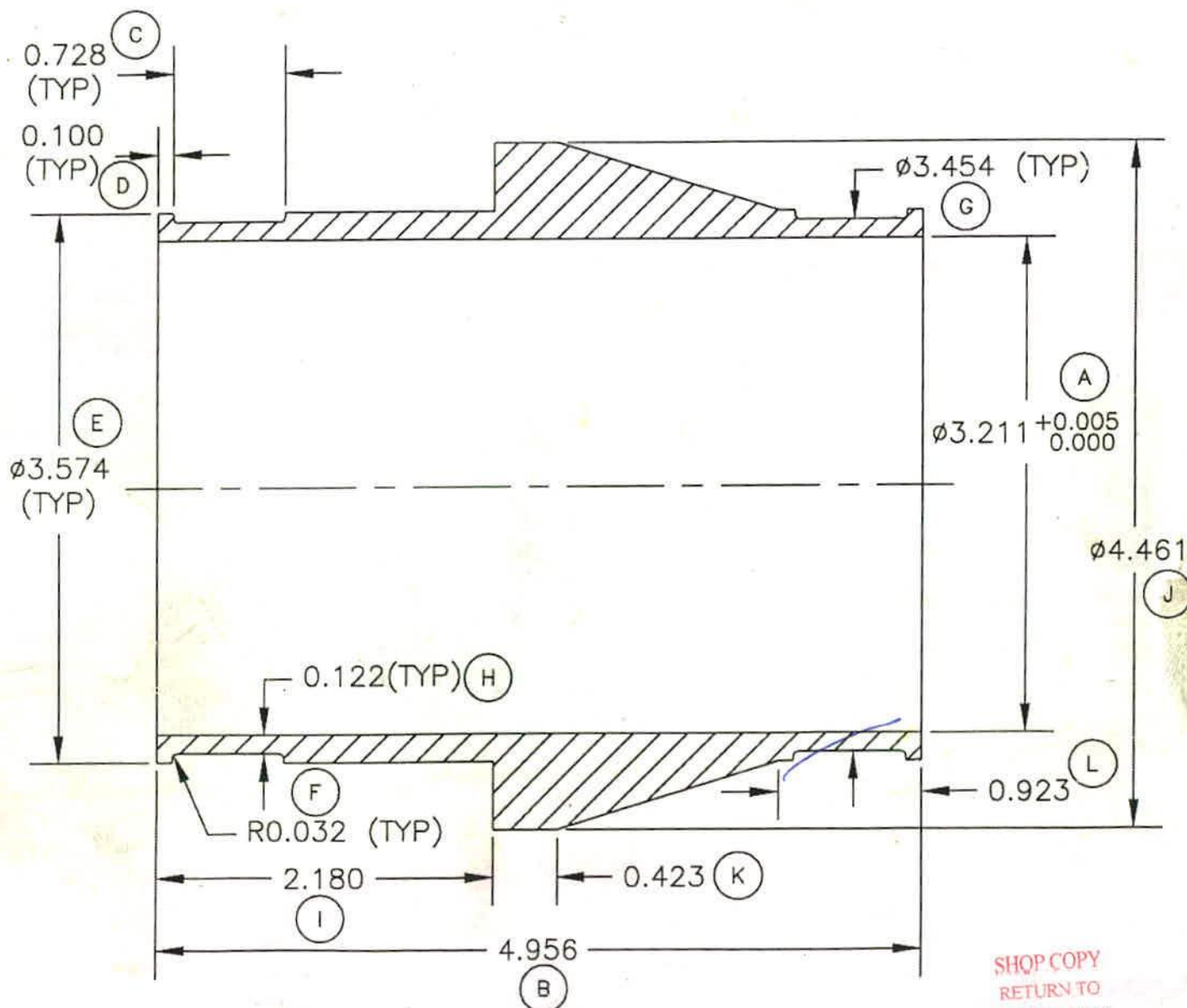
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CHECKED 		APPROVED 		DRAWING NO. DSK 081 REV. B SHEET 1 OF 1	
DATE 03.06.24			TITLE TURNING DETAIL FOR D2940-1 SCALE 1:1		
A	03.03.07		NEW ISSUE		
B	03.06.24		ADDED 4.956 DIMENSION		

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